

WHAT IS CLAIMED IS:

1 1. A method of creating a data path for a process executing on a
2 server coupled to a storage area network (SAN), comprising:

3 parameterizing a set of attributes for a desired data path between the
4 process and a device of the SAN; and

5 constructing the data path that provides said set of attributes.

1 2. The method of claim 1 wherein said set of attributes includes a pre-
2 defined template.

1 3. The method of claim 2 wherein said set of attributes includes a data
2 path owner, application, and the server or servers on which the application is executing.

1 4. The method of claim 2 wherein said pre-defined template specifies
2 a set of performance, availability, and cost metrics for the desired data path.

1 5. The method of claim 4 wherein said set of performance and
2 availability metrics includes at least one of a number of threads, a security level, and a
3 default volume size and characteristics, default path characteristics.

1 6. The method of claim 1 wherein said parameterizing step includes a
2 step of entering a user-defined attribute for inclusion in said set of attributes.

1 7. The method of claim 6 wherein said entering step includes entry of
2 said user-defined attribute by use of a graphical user interface coupled to the SAN.

1 8. The method of claim 1 wherein said constructing step further
2 comprises:

3 searching the SAN for a set of candidate devices;

4 constructing a candidate data path from the server to each candidate device
5 of said set of candidate devices;

6 evaluating each said candidate data path against a selection metric to rank
7 said candidate data paths from a best candidate data path to a least best candidate data
8 path according to said selection metric; and

9 selecting said best candidate data path as the data path to be constructed by
10 said constructing step.

1 9. The method of claim 1 wherein said constructing step further
2 comprises:

3 searching the SAN for a set of candidate devices;
4 constructing a candidate data path from the server to each candidate device
5 of said set of candidate devices;

6 evaluating each said candidate data path against a selection metric to rank
7 said candidate data paths from a best candidate data path to a least best candidate data
8 path according to said selection metric;

9 presenting said ranked candidate data paths to a user for selection; and
10 selecting a user-selected candidate data path as the data path to be
11 constructed by said constructing step.

1 10. The method of claim 9 wherein said presenting step recommends
2 said best candidate data path for selection by said user.

1 11. The method of claim 10 wherein said best candidate data path is
2 presented as a default selection at said selecting step.

1 12. The method of claim 9 wherein said selection metric includes
2 device uptime information.

1 13. The method of claim 9 wherein said selection metric includes
2 performance information.

1 14. The method of claim 9 wherein said selection metric includes cost
2 calculation.

1 15. The method of claim 9 wherein said selection metric includes best
2 SAN practices information.

1 16. The method of claim 9 wherein said selection metric includes
2 learned state and usage information of the SAN.

1 17. The method of claim 9 wherein said searching step prequalifies a
2 subset of candidate data paths by finding those candidates that satisfy a pre-created policy
3 prior to application of said evaluating step.

1 18. The method of claim 1 wherein said constructed data path includes
2 all physical, logical and security component identification and configuration information
3 sufficient to operably link the process to an identified data volume of the SAN.

1 19. A method of configuring a SAN, comprising:
2 discovering, by use of a data path engine coupled to the SAN, processes
3 that are operable on a server coupled to the SAN;
4 discovering, by use of said data path engine coupled to the SAN, devices
5 that are included in the SAN;
6 responding, by use of said data path engine coupled to the SAN, to a data
7 path construction request from a user by providing said user with an interface to accept a
8 set of attributes for a desired data path for one of said discovered processes; and
9 constructing, by use of the DataPath Engine coupled to the SAN, the data
10 path that provides said set of attributes.

1 20. Apparatus for creating a data path for a process executing on a
2 server coupled to a storage area network (SAN), comprising:
3 means for parameterizing a set of attributes for a desired data path between
4 the process and a device of the SAN; and
5 means, coupled to said parameterizing means, for constructing the data
6 path that provides said set of attributes.